

# W5YI

Nation's Oldest Ham Radio Newsletter

## REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

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## FCC RAIDS RADIO SHIP OWNED BY HAM OPERATOR!

Every once in a while we come across a radio story that is unusually bizarre and intriguing. Such is the case of Allan Weiner and the broadcast radio ship, the motor vessel (MV) FURY V. We really can't call it a pirate radio station because it was licensed - although not in the United States. But there were apparently unauthorized transmissions made from the vessel.

On page 8 of the August 1, 1993, issue of the *W5YI Report*, we reported on a fishing trawler known as the FURY V that was being outfitted as a seagoing shortwave radio ship in Boston harbor. The engineering honcho of this effort supposedly was well known radio pirate broadcaster Allan Weiner of "Radio New York International" fame. RNI operated some six years ago from international waters outside the U.S. three mile limit from the MV SARAH. (See Sept. 1, 1987, *W5YI Report*, page 10.)

On July 28, 1987, federal authorities armed with hacksaws and wire cutters, boarded the rusting 200 foot former Japanese refrigeration vessel and dismantled RNI which broadcasted "free form rock'n'roll" programming on 1620 AM, 103.1 FM, 6200 kHz shortwave and low frequency: 190 kHz.

The MV SARAH, registered under the flag of Honduras, was anchored in international waters some four miles out in Long Island sound - one mile beyond the U.S. claimed territorial limit. The vessel supposedly was boarded with permission from Honduras.

Weiner said at the time that he had been trying to get a broadcast license for 16 years but couldn't afford the \$50 million it costs. It wasn't his first incident as a pirate. As a teenager, he operated a backroom 100-watter in Yonkers, N.Y. that lasted three weeks.

The RNI fiasco resulted with the federal court for the U.S. District of Massachusetts permanently restraining Weiner and his RNI buddies from (1) operating a radio broadcast station aboard a ship or aircraft outside national territories, (2) operating a radio broadcast station within the territorial boundaries of the United States and (3) participating in any act, whether direct or indirect, to cause broadcasts of the types described in (1) and (2) above, or to enable such broadcasts to occur. The purpose of this injunction was to keep Weiner from becoming involved in future pirate broadcasts.

The MV SARAH came to a fascinating end! After a lurid career as a fish trawler, a smuggler's ship and finally a radio boat, Allan Weiner's MV SARAH became a Movie Star for one fleeting moment. He had purchased this old rust bucket in 1987 from the US Government. The ship's prior assignment had been to smuggle narcotics under a false deck and it had been taken in a seagoing raid by the DEA and US Coast Guard.

It was renamed the Sarah in honor of some rock hero's wife, and was rebuilt by Weiner as the Radio New York International radio ship to



broadcast music from international waters off Long Island sound. It had to be towed out to sea since its engines would not work.

While working on his latest venture last summer, the MV FURY, Weiner was approached by MGM. They were looking for an old trawler to use in a motion picture to be released this year. Weiner quickly sold the MV SARAH to MGM. The movie company also provided Weiner with funds to deliver and clean out the ship. He immediately began stripping out all the left over radio gear and the generator to be used aboard the FURY V. The movie people then replaced the ship's towers and wheel house with wooden facsimiles.

On Saturday, September 25, 1993, Boston Harbor was cleared and windows were boarded up for a mile. With the cameras in position and rolling, the director yelled "Action!" In a brilliant display of pyrotechnics, the listing ship was blown up in a sequence of 5 explosions that included the Hollywood mandated fireball and white hot shrapnel fragments spewing out from its inferno engulfed hulk.

According to Weiner, who was with one of the camera crews across the bay, "...the concussion and display was nothing short of spectacular. It lit up the harbor in broad daylight. It was a fitting end to the ship." The sensational end to the SARAH was even featured on the syndicated TV show, "Entertainment Tonight".

## The most recent escapade

The MV FURY V originally came from Canada and was bought by a group of Boston business people. We have never been able to find out who they were and what their real interest in the vessel was. But it was probably to sell advertising time on broadcasts aimed back to the United States. The group turned the project over to one Scott Becker last Spring who became its legal owner. The ship needed quite a bit of work. We understand the money paid for the ship was used to liquidate its debt.

The beneficiary of all this was going to be Brother Ralph G. Stair, a gravel-voiced shortwave radio evangelist. Stair's unique brand of feisty fundamentalism, predictions of the imminent end of the world, and the dangers of the new-world-order conspiracy, can be heard daily live and on tape 24 hours a day over WWCR (World Wide Christian Radio) and other short-wave powerhouses plus via satellite on Spacenet 2, and even on some local AM broadcast stations.

According to the Jan. 20th Charleston *Post and Courier* newspaper, in 1987, Brother Stair predicted the United States would be annihilated before 1989 and that Ronald Reagan would not finish his term - not the sort of stuff that the U.S. government likes to hear. In

1988, 40 people in Pennsylvania's Delaware Valley said Stair induced their children to sell their belongings, abandon their families, sign over their funds and join what they said was a cult.

Reportedly, Brother Stair, who operates the so-called "Overcomer Ministry" from a farm in rural South Carolina, provided the thick bankroll for the shortwave radio ship venture. The cash was no doubt raised through contributions from his loyal listeners, who were persuaded that the good Brother needed his own personal transmitter site for shortwave and satellite broadcasting. Brother Stair disputed this. "I didn't put any money into it. It was God's money," he told us in a phone call. Maybe so, but God funneled it through his ministry.

Scott Becker, a satellite time broker and entrepreneur, also holds the ham call sign: KB5MDH - Technician Class. When Brother Stair's Overcomer Ministries wanted some satellite time, Becker sold it to them. The transponder subcarrier used by Brother Stair is actually a sublease from Becker. It was because of Stair's involvement with Becker, that they got him to bankroll the radio ship. Scott telephoned and hired Weiner to handle the construction and conversion of the 140 foot MV FURY V former North Seas fishing trawler to a broadcast radio ship.

## Radio ship registered and licensed

Getting a radio ship legalized by another country apparently is not a problem if you know the right people. It had been done before. Remember, Weiner's former radio ship, the MV SARAH had been registered in Honduras.

Belize, a small tropical country on the Caribbean side of Central America, used to be called British Honduras. People with ties to the Belize maritime authorities and their government were approached by a middle man about registering the ship. They simply were told that they wanted to take a ship down to the Caribbean and broadcast from it. "We need a license for the transmitters and we need registry for the ship." Money was paid and the ship was legally registered and its radio stations provisionally licensed last fall.

In May of last year, a captain and a crew were hired to sail the MV FURY V down from Boston Harbor to the Halsey & Cannon Boat Yard on the Wando River near Charleston, SC..

Even though Allan Weiner is under a restraining order, he accepted the outfitting and engineering job on the belief that the injunction against RNI and himself existed to prevent him from broadcasting illegally without a license. Since there was no question that the ship was properly registered in Belize and its transmitting stations licensed to Becker, Weiner felt he



was free to accept the project. His status would be that of an employee. Becker set up an organization called Voyager Broadcast Services to handle the FURY's business affairs with offices on board the ship.

Equipment was purchased from all over and added to the stuff Weiner had stripped from the MV SARAH before its demise. Most of it was used gear or government (Voice of America) surplus. Weiner found the radio equipment, Brother Stair paid for it.

## FCC raids the FURY V

Unfortunately for the project, the FCC had other plans for the vessel. On Wednesday, January 19, agents from the FCC, Coast Guard and U.S. Marshal's Service raided the MV FURY V still anchored in Charleston harbor.

FCC Field Operations Bureau Chief Richard M. Smith said the station which had operated intermittently from on board the MV FURY was unlicensed and therefore illegal. A week earlier, Commission engineers had conducted close-in radio direction finding efforts in that area and traced the source of an illegal radio signal on 7415 to the motor vessel, FURY.

Armed with an arrest warrant from the U.S. Court for the District of South Carolina, federal officials seized the radio station equipment on board the vessel. Strangely, the arrest warrant was not against a person or people! The defendant was the radio equipment itself. Somehow, through some legal hocus-pocus known only to the judiciary it was determined that it was the equipment that was violating the law and it would be the transmitters that would be arrested and hauled off to jail!

According to U.S. Attorney Joseph P. Griffith, the raid was conducted subject to a law which authorizes civil seizure of radio station equipment operating without a license within the territorial jurisdiction of the United States. He said "...it was the government's intention to seize the property -- not to pursue criminal charges against anyone." (We still don't understand how the "gun" is responsible and not the "trigger-man.")

The ship's broadcast transmitters were then unceremoniously cut from the hull of the ship by a legion of blowtorch-wielding dock workers under the direction of the feds! The Charleston *Post and Courier* published a photograph of FCC senior engineer, James T. Crowell, surrounded by several high powered 1980's vintage transmitters taken from the FURY. "...reportedly valued at up to \$500,000," the newspaper said.

The illegal transmissions monitored by the FCC were apparently RNI program tapes already on board the ship which were broadcast over 7415 on Christmas night. It wasn't until QSL requests came in to RNI's

Hyde Park address that anyone connected with the venture knew about it. It thus appears that the RNI transmissions did in fact take place.

Brother Stair told us that he was no longer involved with the radio ship at all. "The story has been told a thousand times. The project is over. Everybody is speculating like they lost something. It is none of their business. The ship has been turned back to the people who owned it. The transmitters have been taken off the ship by the FCC. I may have a claim for the equipment to get it back. The government will then decide whether to give it back or to sell it. That is the status of the ship."

## Just who is Scott Becker?

Scott Becker operated ham radio from his cabin aboard the FURY V. In addition to the U.S. KB5MDH, he also held another ham station license issued to him from somewhere in the Caribbean.

Local South Carolina amateurs whom Becker invited on board the ship describe him as an opportunist. One of those amateurs is Cyrus "Ed" Frank, KC4OOZ of nearby Summersville, SC. Ed conducts amateur and commercial radio testing for us in the Charleston area. He also holds a commercial radio license.

Ed said he saw both Becker's ham station as well as the Voice of America transmitters just before Christmas. "They were never on the air or hooked up where they could be on the air. The gear was not set up to where it could run or have been operated. It would have taken him considerably longer than to this point in time to have gotten everything hooked up. There is no way, shape or form that those transmitters could have been operated. I had a couple of engineers go out there with me and they will tell you the same thing." If that is the case, then who was broadcasting RNI tapes on 7415 - and from where?

Ed said "Becker's ham station was upstairs in the pilot house ...just a little transceiver. He had a fairly modern HF transceiver sitting there. I never saw or heard him operating HF. I talked to him on 2 meters and 440. I believe he told me he was a Technician but also licensed in the Cayman Islands with full privileges.

"Scott Becker is not a religious person. I don't particularly like the guy... He is a little bit on the shady side. If he can find a loop hole in the law and make some money, he will do it. I remember him saying he would never operate illegally because he knew the FCC was watching him. My opinion is - and it is only my opinion, is that outside interests did not want him setting up a radio station that could be heard here in the United States." Interesting ...and confusing.



Unfortunately, we have been unable to contact Scott Becker. Rumors were that he was in Kansas or Arizona. Captain Robbie Cannon (owner of the Halsey & Cannon Boat Yard where Becker's ship is still docked) said he did not want to get further involved and declined an interview with us or to give us Becker's phone number. Certainly he would know how to reach him since he still has Becker's 140-ft. ship docked in his boat yard.

Brother Stair apparently also has - but would not give us - Becker's phone number. "I won't give it to you. I am out of this picture," he said, "...and I would appreciate it if you would let me stay out of it. You can speculate all you want to and I will just do my job," he said angrily. "Put anything you want to in your paper."

It was reported over the Genie computer network that Becker was also operating HF packet from the ship, so the possibility exists that he could have used his HF ham gear on 7415 kHz. Jim Crowell, the FCC engineer (also KØJC) from Powder Spring, GA who handled the seizure confirmed to us the existence a Yaesu HF packet setup.

Larry Clance, FCC Assistant Bureau Chief for Law in Washington, DC told us that their engineers concluded that the transmissions on 7415 were made by the high powered broadcast transmitters based on measurements by their engineers. "We believe that the radio equipment that was being used was the broadcast equipment that we seized. We have tapes of the RNI broadcasts from the ship by a 'Johnny Lightning' or something like that. I believe they were made between Christmas and New Year's. The close in radio direction finding on January 14th concerned the transmission of a tone signal for about 2 hours from the vessel. The morning of the seizure, there was a test broadcast for about 10 minutes on 6240."

Engineer Crowell told us their long range monitoring network picked up a transmission from the general vicinity of the ship on Dec. 29th. "Based on that information, we did direction finding in the area. When we went on board, one of the high powered transmitter oscillators was sitting was 3120. The transmitter was hot ...fired up."

Sources tell us that the plan called for Brother Stair to broadcast on one transmitter, and sell time on the other. Weiner's rejuvenated Radio New York International programming was supposedly going to be allocated some broadcast time each night under this arrangement as an additional payment for his services. The letters "RNI" had been painted on the bridge of the radio ship. Weiner was aboard the FURY when U.S. Marshals executed the arrest warrant but quickly left.

The ship itself was not permanently seized -- only its high power transmitters. Even the ham station was not touched. We decided to talk to Allan Weiner to get

his side of the story.

## Interview with Allan H. Weiner

We hooked up with Allan Weiner the last weekend in January. He told us the FCC raid "...hit us like a sledge hammer. I built the station for the Overcomer Ministries. The ship was going to anchor off a small island off Belize. They were working on buying a small atoll close to the shoreline to anchor the ship.

"My main profession is that I am a radio engineer. I build radio stations. I have built them all my life. I once held the First Radiotelephone license, but the FCC would not convert it to a General Radiotelephone Operator License like they did for everyone else. The FCC does not like me personally."

"They just came on board and seized the ship. Even the country of Belize was not asked permission for them to board. Before anyone even knew what was going on, they [the FCC] hired a crane barge at a \$1,000 an hour and had a crew of 20 guys come on that boat and stripped it down in a day!

"The government is alleging that the ship was broadcasting which is an impossibility. I installed those transmitters. There were four shortwave transmitters that were on board the FURY. Two of them were not even hooked up. One had a gassy final which you couldn't turn on without blowing up the power supply. Another had an intermittent problem in the exciter and could not go on the air.

"And there is more on top of that. The transmitters had two generators. There was a main generator and a backup. The main generator was down for repairs because it was leaking diesel oil. The other generator had a burned out voltage regulator. Everyone at the shipyard knew this. We have witnesses that broadcasting could not have happened! I don't know what broadcasts the FCC was picking up on 7415 but they weren't coming from that ship.

"The government simply wanted to destroy the radio station. Whether it was because they did not like Brother Stair ...whether it is because they hate me so much ...I don't know what it was. All I know is the basis of what they say does not make any sense because that ship just was not capable of broadcasting.

"What I assume happened was that the FCC was looking for any excuse they can. They trumped up some charges. The proof of that is the ferocity in which they dismantled the station. They hired one of the biggest ship yards in Charleston to wreck that station.

"Brother Stair has now decided that the project is over. The ship is in good condition and is now up for sale. It is still in Scott Becker's name. And I am waiting to get paid."



I asked Weiner why the RNI name was painted on the ship. He said, "RNI was going to lease time from Brother Stair for about an hour or so a day on one of the transmitters to broadcast RNI programming on tape. That was kind of like part of the payment. The RNI details were never worked out. The Overcomer Ministries were going to be up on the air 24 hours a day.

"The Ministry was agreeable to giving us a little bit of satellite time and air time. Brother Stair painted names on the boat of all the people that were going to be leasing air time. The RNI painting is just a little tiny plaque -- about 8 inches in diameter -- on the front of the ship. He did that as a courtesy. The main sign painting was for the Overcomer Ministry because they were the ones that would be on the air 24 hours a day broadcasting out of Belize."

"Brother Stair is now suing the government for the equipment. That will plow through the courts. I know they don't like Brother Stair because he is a very controversial preacher. I have been to his church and to his farm is in Walterboro, South Carolina.. Brother Stair is very thrifty and frugal and lives a very modest life. His home is an old converted trailer and he drives an old 1983 Chrysler.

"My attorney has already notified the court that I will cooperate in any way, shape or form. Whatever they want to know, I will tell them. I will be completely candid with them. The crew on the ship will back me up on it because they saw the frustrations I was going through just to try and get the generators to run."

"This whole thing is a tragedy ...and a travesty. The dismantling was ordered by Washington. Whether it was the FCC, the State Department or the FBI, I don't know. I did everything I could to make sure that station was licensed, legal and proper. What I saw being done to that ship is a horror. Every ham, every broadcaster, anyone that has anything to do with communications - should be very, very nervous. Because if this act goes unpunished, or unresolved - or uninvestigated, I feel bad for anyone that has a radio transmitter. The next thing they are going to do is knock down a door, clean out his station ...and confiscate his house."

#### Unanswered questions...

- (1) Who are the Boston businessmen who finance radio broadcast ships? It isn't the first time.
- (2) Who actually did the testing and/or broadcasting on 7415? And what equipment was used?
- (3) Were there other reasons that the radio ship was gutted of its transmitters?
- (4) Is there more to this story? Apparently so. Stay tuned.

#### ARRL points out...

#### FLAWS IN RF SAFETY PROCEEDING

The ARRL has found plenty of things to question in the FCC's investigation of a new RF exposure standard (ANSI/IEEE C95.1-1992). The FCC is considering whether to adopt the new standard, which is believed to be more restrictive of RF exposure than previous standards. In comments filed with the FCC in ET Docket 93-62, ARRL urged that the matter be dropped entirely and revisited later in a more comprehensive proceeding.

#### ARRL argued that the FCC:

- Actually proposed no rule changes even though it issued a Notice of Proposed Rule Making (NPRM);
- Is considering a standard that is too expensive (\$113.00) for many amateurs to obtain a copy of;
- Published a summary of parts of the standard that is not a substitute for the standard itself;
- Did not even provide the summary of the standard in the Federal Register version of the NPRM;
- Issued a NPRM that is not sufficient as required by Federal laws and court precedent;
- Is considering a standard that claims that a safety factor of 10 should be "safe for all" but recommends a safety factor of 50 for the general public, without justification (ARRL called this recommendation "...completely and utterly specious");
- Is not the expert agency for evaluating the effects of RF radiation on human health and safety;
- Should withdraw the NPRM because the Environmental Protection Agency recommended against adoption of the standard (EPA said the standard has "...serious flaws that call into question whether its proposed use is sufficiently protective of public health and safety." EPA also said that the standard "...in many cases lacks explanation, consistency and well-founded justifications. ...[There is concern that the complexity of the 1992 ANSI/IEEE standard may make it difficult to comply with or effectively enforce.]")
- ARRL said it has taken an "aggressive approach" toward educating amateur licensees about electromagnetic radiation (EMR): "Avoidance of EMR exposure by amateurs, especially in the VHF-UHF frequency ranges, is the target of the League's educational efforts."

#### Hand-held units, indoor antennas, restrictive covenants

"There are infrequently encountered amateur radio activities which can, for short periods, produce significant field intensities," the ARRL observed. "Hand-held



transceivers, for example, which are widely used by radio amateurs, especially in emergencies, may produce significant, highly localized fields. Unless he or she uses a remote microphone, it is conceivable that the licensee may occasionally be exposed to RF levels at or even slightly above the ANSI/IEEE maxima.

"Also, some amateurs have no choice but to employ indoor antennas in the face of typically restrictive land use covenants that preclude the use of appropriately high, outdoor antennas."

ARRL said that if the FCC adopts its proposal, the Commission will be "obligated" to facilitate installation of amateur antennas in configurations that will permit compliance with the RF exposure guidelines.

We interpret this comment to mean that the FCC would have to protect amateurs who would have to mount their antennas on high towers or roofs and farther away from people in order to comply with the rules - and such installations are often the targets of restrictive real estate covenants. The League said that the FCC "must completely preempt the judicial enforcement of restrictive covenants which cause amateur antennas to be installed indoors or at locations on a horizontal plane with human occupants of residences. Indeed, such an order is overdue anyway; but the combination of a strict RF exposure standard and continuation of a hands-off attitude with respect to antenna covenants is tantamount to a license revocation, as it would preclude the operation of any amateur station subject to both restrictions."

## **FCC MANDATES USE OF NEW FCC FORM 610**

The following Public Notice was issued by the Commission on January 31, 1994: [Quote]

### **"FCC REVISES APPLICATION FOR AMATEUR OPERATOR/PRIMARY STATION LICENSE**

FCC Form 610, Application for Amateur Operator/Primary Station License, has been revised. The new version dated November 1993, may be ordered from the FCC Forms Distribution Center at (202) 632-3676 after February 14. The new form reflects recent changes in the Amateur Rules.

Effective March 1, 1994, only the November 1993 edition of the FCC Form 610 may be used to obtain an Amateur license. Earlier editions of the form received after March 1, 1994 will delay issuance of the license as the application will be returned without action and the applicant will be required to refile on a current form. For further information contact the Consumer Assistance Branch, Private Radio Bureau, Gettysburg, PA 17325. Telephone number 717-337-1212" [End Quote]

We immediately called the FCC's Special Services Branch in Gettysburg since this represented a change over what we were told before. The previous instructions to all VECs were that the new FCC Form 610 could not be used until March 1st. The Public Notice said "Earlier editions of the form received after March 1... will be returned without action."

Gettysburg official, Larry Weikert now tells us that the new form may be used by volunteer examiners effective February 15th since those applications won't arrive at the FCC until March 1st. This is so the new forms can be entered when the Commission converts to their new Amateur computer processing system on that date. Larry also said "...he would work with us" during the transition period.

Both the ARRL-VEC and W5YI-VEC have sent address labels of all active VE teams to Gettysburg. Each team will be sent an "opening quantity" of the new FCC Form 610 "...perhaps 20" according to Weikert. He said (on February 2nd) that he and his secretary, Jan would be sending out nearly 1700 envelopes containing the new Form 610's and that "...it could take a couple of weeks to complete."

Repeated telephone calls during regular business hours (after 8 a.m. Eastern time) to the FCC's Forms Distribution Center at 202/632-3676 to determine Form 610 application availability were incredibly frustrating! (The Public Notice had said orders could be placed after Feb. 14th, yet it appears Gettysburg has the form now.)

A computer answers the FCC forms ordering hotline (which I understand is in Hyattsville, Maryland) with a short tone followed by a female computer voice: "Extension 401 is unavailable please dial another extension number." We had no idea what to do at that point - nor did the Public Notice indicate - any extension. Ten seconds later - and with no additional instructions - the computer says "Goodbye." End of telephone call. So much for ordering forms from that number! Maybe you will have better luck than we did.

Plan B. We included a copy of the new FCC Form 610 in our December 15th newsletter and it may be necessary for VE teams to use that form as a master to duplicate additional quantities. Be sure to use the right color paper!

In addition, we have printed quantities of the new FCC Form 610 which are available at a cost of 5¢ each - our printing cost - plus \$1.05 for special fourth class postage or \$2.90 for 2-day priority mail if you need them fast. We will ship within 24 hours. Order in quantities of 25, 50 or 100 only.

(Order from: The W5YI Group, P.O. Box 565101, Dallas, TX 75356 or telephone: 817/461-6443 if you have a VISA or MasterCard credit card.)



• The Cass County Amateur Radio Club, Logansport, Indiana, has submitted a lengthy and detailed **Petition for Rulemaking which looks toward reorganizing the Amateur Radio Service.** The principal author of the petition is Extra Class **William C. Wells, WA8HSU.** The 23-page single-spaced proposal would:

(1) **Reduce the number of amateur license classes** from five to three: Novice, Technician and General.  
(2) Licensees currently holding the Advanced and Amateur Extra Class would be allowed to retain their license class with no additional privileges above **General Class which becomes the top grade license.**

(3) **Restructure test elements to:**  
Element 1A: 5 wpm Morse code.  
1C: 20 wpm Morse code. (Optional endorsement from VE's which is not required for any license.)  
2: Regulations, Practices, Procedures (Written 35 questions/pass: 26)  
3: Safety (25 questions/pass: 18)  
4: Technical (Written 40 questions on the following topics:) # Questions  
Propagation/Characteristics, 4  
Electrical Principles, 8  
Station Equipment/Components, 6  
Practical Circuits: 10  
Signals/Emissions, 6  
Antennas/Feed Lines, 6  
(Passing score: 30)

(4) **License requirements:**  
Novice: Elements 1A, 2 & 3  
Technician: Elements 2, 3 and 4  
General: Elements 1A, 2, 3 & 4

(5) **Privileges:**  
Novice: CW/SSB/FM - 160 meters \*  
CW - 80/75, 40, 30 & 15 m \*  
CW/SSB/FM - 10 meters \*  
(Power: 20 watts PEP)  
CW/SSB/FM 6 m to 450 MHz.\*  
(Power: 25 watts PEP)  
(\* = Entire band.)

Tech.: All privileges above 30 MHz.  
(Full amateur power)

General: Full privileges/all frequencies

(6) **Convertibility:**

**No Code Tech:** May upgrade to General by passing 5 wpm CW.

**Tech. before 2/14/91 and Tech Plus:**

May operate as General Class until expiration of their license and they will be issued a General Class license upon renewal or modification.

**Novice:** May upgrade to General by passing Element 4.

(7) **All Amateur Service licenses will be**

**operator licenses only** and will be issued for the lifetime of the holder.

"All amateur licenses are redefined as an operator license only with the callsign identifying the operator like a license number identifies a commercial operators. ...If a way of purging the rolls of deceased Amateur Service licensees is needed the simple addition of a Social Security number to FCC records will provide an easy and highly automated way to accomplish this."

(8) **Element credit for Commercial Operators:**

1st/2nd Class Commercial radiotelegraph operators receive credit for Element 1C (20 wpm) and written Element 4.

GROL (General Radiotelephone Operators) and GMDSS Maintainers receive Element 4 credit.

(9) **All band plans below 30 MHz eliminated.**

Any mode which can be legally transmitted in the Amateur Service MF and HF spectrum may be transmitted except in the 30 meter band which is limited to narrow-band widths.

(10) **Establish a new 1600 meter LF amateur band** at 160 to 200 kHz (on a secondary basis) with 100 watt power limit for CW, RTTY and data.

• **STS-60 SAREX: A BIG SUCCESS!**

The Space Shuttle Discovery made a spectacular, historic, on-time liftoff on Thursday, Feb. 3rd at 7:10 EST (12:10 UTC) from the Kennedy Space Center.

Discovery's launch marked the first joint U.S.-Russian Space Shuttle Flight. The eight day mission is the first of several joint missions planned in preparation for the international Space Station.

Cosmonaut Sergei Krikalev, U5MIR, was one of the six crew members on board. His fellow American crew mates include Commander Charlie Bolden, KE4IQB, Pilot Ken Reightier, and Mission Specialists Jan Davis, Ron Sega, KC5ETH, and Franklin Chang-Diaz.

The primary payloads are the Wake Shield and the Spacehab facilities. Also on board was the Shuttle Amateur Radio EXperiment (SAREX) secondary payload. The objective of SAREX is to provide an opportunity for school students on earth to talk directly with astronauts in space via Amateur Radio.

Five school groups were scheduled for either direct or telebridge lashup:

four in the U.S. and one in Russia.

SAREX was officially activated at 14:27 UTC on Feb. 4 with a successful voice contact through the University of Surrey (England) amateur radio station. Ex-AMSAT president Doug Loughmiller, G0SYX (also KO5I) initiated the first contact with the STS-60 crew.

The shuttle operators are using Charlie Bolden's call sign (KE4IQB) on FM voice and W5RRR-1 on packet radio. All operations are in split mode with a 145.55 downlink.

The 45 pound "Configuration C" is being flown. This consists of the handheld Motorola transceiver, window antenna, packet module, headset, and a recorder. This set up is capable of operating in either the attended voice or attended/automatic data mode.

Schools scheduled to contact STS-60 are the Boise Senior High School (Idaho), Chariton High School (Iowa), James Bean School (Maine), Mars Area Middle School (Pennsylvania) and the House of Science & Technology for Youth in Moscow, Russia.

The SAREX team had a highly successful QSO with the school group in Boise, Idaho. That contact had nineteen students from several schools asking real-time questions to Shuttle Commander Charlie Bolden.

RFI problems on the Wake Shield Facility delayed its deployment and has affected the SAREX school program somewhat. The Mars, Pennsylvania school contact had to be postponed.

The Moscow House of Science & Technology for Youth contact took place as planned, however. At 10:42 UTC on Feb. 6, Sergei Krikalev, U5MIR, QSOed with the school, the first time a cosmonaut on a U.S. space shuttle has communicated with Russian citizens.

Leo Lebutin, UA3CR and Valery Agabekov, UA6HZ were the prime school coordinators for the contact. Aleksandr Kaleri, U8MIR, sent Sergei greetings from Russia and six students, asked their questions to the crew.

In addition, several cosmonauts witnessed the communications. The SAREX contact was also broadcast live throughout Russia on HF (80, 40 and 20 meters) as well as VHF.

Operators on the ground report the packet equipment is working fine and the packet robot has been quite busy! At last report, the QSO sequence number was nearing the 2000 mark.



# W5YI REPORT

Nation's Oldest Ham Radio Newsletter

Page #8

February 15, 1994

Those of you who have heard or worked the STS-60 crew and wish to receive a QSL card need to send your signal report and an SASE or an envelope and IRCs to: STS-60 QSL, Education Activities Division, ARRL, 225 Main St., Newington, CT 06111.

● On Feb. 1, 1994, the VEC's Question Pool Committee (QPC) released a **new syllabus for the Advanced Class written examination: Element 4(A)**. This outline will be used as a guide to prepare new Advanced Class questions. A newly revised Element 4(A) question pool is scheduled to be released on December 1, 1994.

Questions are limited to 210 characters - multiple choices to 140 characters each. Copies of this syllabus are available from: *Ray Adams, N4BAQ, QPC Chairman, 5833 Clinton Highway, Suite 203, Knoxville, TN 37912-2500.*

● The American Radio Relay League held their 1994 Annual Meeting on Jan. 21-22, 1994. Pres. Wilson's report to the Board of Directors covered:

- (1) ARRL readiness for electronic filing of license data;
- (2) the League's aid to AMSAT for Phase 3D fund raising;
- (3) the amateur radio enforcement activities of FCC in 1993, usually with assistance of the Amateur Auxiliary;
- (4) the negotiated amendment of Rule 97.113, putting common sense into communications for public events;
- (5) another rules-change bringing Novice exams into the VE system (without charge as far as the ARRL- VEC is concerned);
- (6) FCC preemption of local ordinances inhibiting ham use of transceivers that could incidentally receive public service frequencies;
- (7) much effort, behind the scenes and publicly, to restore club station licensing and provide for choice of call signs by amateurs;
- (8) ARRL opposition to a "Quiet Zone" for all of Puerto Rico;
- (9) the League's proposal for additional callsign blocks in Puerto Rico, Hawaii and Alaska;
- (10) continued efforts to reach compromise rulemaking for autoforwarding of digital messages on HF;
- (11) the rulemaking docket clarifying responsibility for automatic transmission of data messages as "Originator and

First Forwarder";

- (12) efforts to assure that Government plans for wind profilers at 449 MHz would accommodate continued amateur use of the band;
- (13) ARRL defense of the 902-928 MHz band as against an FCC rulemaking to expand "Automatic Vehicle Monitoring";
- (14) the current rulemaking to provide amateurs with a secondary allocation at 219-220 MHz with certain restrictions;
- (15) the FCC idea of "instant licenses" with self-assigned call signs for first-time licensees and ARRL's counter proposal that electronic filing is better;
- (16) ARRL's legislative success in staying off administrative fees for amateurs, providing the basis for vanity call signs.

Chief Financial Officer Shelley reported that financial results for 1993, from all indications, will exceed projections for excess of revenues over expenses by a significant margin.

A 219-220 MHz Band Plan was adopted. Local Coordinating Bodies should coordinate this band such that ten 100-KHz Primary channels are created centered on the following:

A: 219.050	B: 219.150
C: 219.250	D: 219.350
E: 219.450	F: 219.550
G: 219.650	H: 219.750
I: 219.850	J: 219.950

Use of two of these channels in combination to achieve a full duplex environment is desirable.

The Ad Hoc Committee on Vanity Call Signs suggests the vanity call sign system should be phased in with a series of four three-month windows before opening the system to all. Previously held call signs regardless of license class, format or call district should be available first. The second, third and fourth windows would be by license class to Extra Class, then Advanced, and then General. At the end of one year, any licensed amateur would be eligible for any call within his call area and license class blocks, or a lower class block. The fee should be a one-time occurrence, and should be refunded if none of the call signs on the application are available. Calls should be held for two years after expiration or trade-in, and should not be transferable; these measures should help preclude "trafficking" in call signs.

● About 9,000 happy amateurs flocked to the **34th Annual Tropical Ham-**

**boree** held the weekend of Feb. 5-6 in Miami, Florida. Business in the commercial exhibit area and the flea market was brisk! Members of the Amateur Radio Industry Group (ARIG) heard ARRL's Rosalie White, WA1STO discuss ham radio growth. The number of new, total and amateurs upgrading their license are substantially higher than a year ago. Also covered were the ARRL effort to promote ham radio. New video public service announcements were shown featuring astronaut Linda Godwin, N5RAX and Nobel Prize winning Physicist Joe Taylor, K1JT.

The ARIG agreed to form two action committees that would address (1) FCC regulatory proceedings and (2) methods for continuing growth and removing barriers to amateur radio. The ARIG will take positions and submit formal comments on behalf of the amateur radio industry.

At the Saturday FCC Forum, Private Radio Bureau Chief, Ralph Haller presented a very interesting talk about the Communications Evolution and Revolution. He said the future was the administration's "information superhighway," PCS - the Personal Communications Service ...and on-line services such as the Internet. He felt that Amateurs could play a major role due to their practical knowledge.

Haller also went over 1993 rule making highlights and FCC plans for 1994 which included "instant licensing" and the issuance of call signs of choice. "During mid to late summer, some of you will hopefully be able to order specific call signs," he said.

He urged amateurs to "...continue to improve your service" to avoid "spectrum targeting" by other services. "True or not, the perception was that 220 to 222 MHz was not substantially used by the amateur service."

Haller also fielded several questions from the floor. One dealt with an FCC rule that seemingly prohibits amateur radio instructors from being volunteer examiners if they pass out teaching aids or publications since they might be considered to be a license preparation material distributor which is prohibited by the rules. Haller gave the impression that he did not feel that a classroom teacher was a distributor. "Maybe we need a little better interpretation," he said. "We need to look at that prohibition again."



## FCC Releases Element 9 Question Pool for: GMDSS MAINTAINER LICENSE EXAMINATION

On Jan. 18th, 1994, the FCC released the question pool for Commercial Radio Operator written examination Element 9. This is the question pool associated with the **Global Maritime Distress and Safety System (GMDSS) Radio Maintainer** License examination.

Passing Element 9, In addition to the previously released Elements 1 (Basic Radio Law & Operating Practices) and 3 (Electronic Fundamentals and Techniques), is a requirement for a GMDSS Radio Maintainer License.

Copies of the pool are not available from the FCC. They can be purchased from the Commission's duplicating contractor, *International Transcription Services, Inc.*, at (202) 857-3800. The W5YI Group, Inc. will also have printed copies of this question pool available shortly.

Commercial Operator License Examination Managers (COLEMs) must use questions verbatim from these pools when preparing the question sets they administer to examinees. Element 9 is divided into 4 subelements - each containing questions on various categories: (256 total questions in question pool)

Subelement 9A: Radio System Theory (74 questions in pool)  
(5 topics, 13 questions on test)

Subelement 9B: Amplifiers, Power Sources, Troubleshooting  
(70 questions, 9 topics, 13 questions/test)

Subelement 9C: Digital Theory (67 questions in pool)  
(5 topics, 13 questions/test)

Subelement 9D: GMDSS Equipment & Regulations  
(45 questions, 8 topics, 11 questions/test.)

The minimum passing score for Element 9 is 38 correct answers on a 50 question set.

The Element 9 questions were provided by the American Radio Association. The ARA is one of the two main organizations of shipboard Radio Officers.

An Element 9 examination is used to prove that the examinee possesses the technical qualifications necessary to perform maintenance duties on equipment in the Global Maritime Distress and Safety System. The next question pool to be released will be Element 7, needed for the GMDSS Operator License.

## BOOSTING STATUS IN THE KITCHEN-SINK BAND

*New products and services threaten amateur access...*

The American Radio Relay League has filed a *Petition for Rule Making* with the FCC asking that the Amateur Service be granted primary status in the 902-904 and 912-918 portions of the 902-928 MHz band. ARRL General Manager David Sumner, K1ZZ, called 902-928 MHz -- a band with many uses -- the "Kitchen-Sink Band" in a QST editorial last June.

ARRL wants amateurs to have primary status

because new developments in the band could make ham usage more difficult there, and a primary allocation would help preserve amateur operations, and because the FCC has previously stated that amateurs should use 902-928 MHz to serve needs that formerly used 220-222 MHz.

The 902-928 MHz ARRL bandplan shows the following:

- 902.0-903.0 Weak signal (902.1 calling frequency)
- 903.0-906.0 Digital (903.1 alternate calling freq.)
- 906.0-909.0 FM repeater outputs
- 909.0-915.0 Amateur TV [ATV]
- 915.0-918.0 Digital
- 918.0-921.0 FM repeater inputs
- 921.0-927.0 ATV 927.0-928.0 FM simplex and links

The band has not yet become a hub of major activity as have other ham bands. Still, the tremendous growth in Amateur Radio in this country -- over 650,000 licensees currently -- begs the question of where amateurs will migrate to as the VHF and UHF bands become saturated. Moreover, ARRL finds that 902 activity is increasing. The organization began its FCC request with these words:

"The 902-928 MHz band has been available for amateur radio use generally in the United States since 1985. With a few geographical limitations, the entire band has been available for use, and has been used increasingly, by United States amateurs since then, especially at 902-904 MHz and at 912-918 MHz. The band was allocated on a secondary basis for amateur use in PR Docket 84-960. ..."

"Since that time, the segment 902-904 MHz and the segment 912-918 MHz have each been used significantly for amateur weak-signal propagation experimentation and television operation, respectively. These amateur uses in particular have become firmly established in those respective band segments, and the amateurs active in those band segments especially have come to depend on them for regular communications using these specialized communications modes. Indeed, restrictions on, or difficulties with television operation in other bands, have made the continued use of the 902-928 MHz band increasingly important for amateur operation."

"The differences between and among the various VHF and UHF amateur allocations necessitate a small weak-signal subband in each band for propagation research. The rapid increases in amateur use of 902-928 MHz for these purposes, coupled with current, apparently unplanned allocation proposals which would significantly detract from the ability of amateurs to continue to utilize 902-904 MHz and 912-918 MHz on a secondary basis, together necessitate a primary allocation for the Amateur Service in at least these two segments of the band."



## AVM, LMS, Wind Profilers and more

The "unplanned allocation proposals" which "would significantly detract" from amateur user are, according to the ARRL, mainly the expansion of Automatic Vehicle Monitoring and the installation of wind profilers in the band.

Automatic Vehicle Monitoring (AVM) involves the use of beacon transmitters in vehicles and multiple-site base stations which can locate beacons based on signal time-of-arrival. It also includes the use of short-range transmitters that query antenna-like tags on objects or vehicles at such places as toll stations.

AVM has been permitted, but not widely deployed, in the 902 band for years. AVM promoters include Teletrac, a vehicle-locator service originally conceived to find lost children and now operating in L.A., Chicago, Dallas-Ft. Worth, Detroit, Houston and Miami; and Pinpoint, a Dallas-based service that aims to aggressively compete for vehicle-location and mobile data customers over the next few years.

(We recently rode in a Pinpoint-equipped bus. The bus transmitted a beacon to base stations, which conveyed their reception data to a central computer via landline. The computer calculated the bus location and returned this information to the base stations, which sent it back to the bus. With each position update, an onboard PC moved an icon of the bus on a map displayed to passengers.)

These companies expect major expansion of the AVM service across the country. The FCC is considering an update to the AVM rules - and changing the name of the service to Location and Monitoring Service (LMS). The updated rules and new players will certainly increase usage and congestion in the 902 band.

## Hierarchy of status

Amateur Radio is secondary in the 902 band. It cannot interfere with primary uses and must accept interference from them.

The highest priority of use in the 902 band is military radiolocation, although that service must accept interference from Industrial, Scientific and Medical or "ISM" devices (mostly heating and manufacturing equipment), centered on 915 MHz. Government, non-military operation of radiolocation systems is authorized on a secondary basis to military radiolocation.

After that, the hierarchy of allocations is: Government fixed and mobile stations; AVM; Amateur Radio; Part 15 Devices (mostly wireless computing devices and new cordless telephone models). In addition to the expansion of AVM/LMS, the League is concerned that the FCC may permit yet another user into the band: wind profiler radars, in 908.75-921.25 MHz. Also,

wireless computing systems and cordless phones are increasing their use of the 902 band. Those products are permitted as much as one watt of power in the ISM spectrum if they utilize spread-spectrum techniques. These Part 15 users are also concerned about interference from and to AVM/LMS stations. The FCC briefly gave Part 15 users and amateurs grave reason for concern!

## Removing hams and Part 15?

Originally, the FCC requested comment on whether, in order to accommodate LMS in the 902-928 MHz band, it would be necessary to remove Amateur Radio and Part 15 users from the band or restrict their frequencies or operations! This notion shocked the ARRL and Part 15 users, who demanded to know why the FCC would solicit comment on restricting them further or booting them out of the band entirely. Letters and lobbying visits to the FCC followed.

The FCC quickly backpedaled in a May 5, 1993 "Erratum". The FCC revised the wording of its AVM/LMS NPRM to read that commenters should offer potential solutions to sharing among the different uses, "short of removing Part 15 users and amateur operations from the band, restricting where such users could operate in the band, or placing stricter limitations on the operation of such users in this band."

## ARRL identifies 220 MHz "gotchas"

The ARRL found some interesting FCC statements in its files on the reallocation of 220-222 MHz from Amateur Radio, one of the most intensely opposed FCC actions of recent times. There, the FCC claimed that amateurs would not be greatly injured by losing 220-222 MHz because they could, among other solutions, move to the 902 band. "Further," the FCC said, "we believe the 902-928 MHz band provides a significant opportunity for the growth of packet radio."

But is the FCC saying one thing and doing another? The expansion of AVM/LMS systems, the introduction of wind profilers and the proliferation of Part 15 devices without any RF susceptibility information to consumers, stands to effectively deprive amateurs of the use of this band in the future, according to the League.

ARRL told the FCC: "The instant proposal, to allocate on a primary basis two small segments of the 902-928 MHz band used for weak-signal operation and television operation by amateurs, is no more than a means of insuring that existing operations, to which those portions of this specific frequency band are uniquely important, can continue unimpaired in the future, notwithstanding increases in other, non-amateur uses of the band."